

**READING DRY CHEMICAL ARRAYS THROUGH THE SUBSTRATE**

ABSTRACT OF THE DISCLOSURE

5

10

5

A method of interrogating an addressable array unit having a transparent substrate with a back surface, and an array with a plurality of different chemical features on a front surface. The method may include illuminating the features while the array is dry, with an interrogating light which is directed through the substrate from the back surface and onto the chemical features on the front surface. The light emitted from respective features in response to the interrogating light may be detected, which detected light has passed from the front surface, through the substrate and out the back surface. In one arrangement the light is emitted from locations of the features which are spaced from the front surface a distance of less than one-eighth of the wavelength of the illuminating light in a gas or a vacuum which is in contact with the dry array. Other methods and a package containing an addressable array are also provided.